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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,725	12/16/2003	Tsunenori Yamamoto	503.39221CX1	3672

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EXAMINER	
PIZIALI, JEFFREY J	
ART UNIT	PAPER NUMBER
2629	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/735,725	YAMAMOTO ET AL.	
	Examiner	Art Unit	
	Jeff Piziali	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *1* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20,24 and 25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-20,24 and 25* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/695,174.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species:

Species 1, drawn to inventive embodiment 1, wherein the illumination start time and the illumination "on" time are adjusted so as to be equal to the average values of the optimum values for all the individual gradations to be covered; and

wherein illumination unit 300 has a structure in which a single fluorescent tube 303 is arranged for the individual areas "a" to "f", and there is a scattering and reflection panel 302 enclosing the fluorescent tubes, and a scattering panel 301 covers the scattering and reflecting panel [*e.g., see figs. 1, 2, and 4-7; and page 7, line 6 - page 13, line 21 of the specification*].

Species 2, drawn to inventive embodiment 2, wherein unlike embodiment 1, the average value of the individual gradation weighted with the number of pixels displayed for the individual areas is estimated in real time, and the illumination start time and the illumination "on" time are controlled adaptively; and

wherein like the embodiment 1, the display controller 100 (drive means) is composed of a data emphasis circuit 110, a lighting control circuit 120 for the illumination unit 300, an illumination lighting controller 122 and a timing adjusting circuit 130 [*e.g., see fig. 8; and page 13, line 22 - page 15, line 5 of the specification*].

Species 3A, drawn to inventive embodiment 3, wherein rather than have the illumination lighting controller 122 as the illumination control means control the illumination start time and the illumination "on" time of the illumination unit so that the time integral value of the transmission factor for the frame in which the display characteristic (transmission factor) changes due to the overshoot drive may be almost equal to the time integral value of the transmission factor for the frame in which the display characteristic (transmission factor) reaches a designated level and stays in a stable state, this embodiment has a difference from the embodiment 2 in that the illumination start time and the illumination "on" time are defined so that the transmission factor at the individual frame may be identical with respect to the human brightness sensation characteristic;

wherein this embodiment has almost the same structure as the embodiment 2; and

wherein the illumination start time and the illumination "on" time are controlled dynamically [*e.g., see fig. 9; and page 15, line 6 - page 16, line 24 of the specification*].

Species 3B, drawn to inventive embodiment 3, wherein rather than have the illumination lighting controller 122 as the illumination control means control the illumination start time and the illumination "on" time of the illumination unit so that the time integral value of the transmission factor for the frame in which the display characteristic (transmission factor) changes due to the overshoot drive may be almost equal to the time integral value of the transmission factor for the frame in which the display characteristic (transmission factor) reaches a designated level and stays in a stable state, this embodiment has a difference from the embodiment 2 in that the illumination start time and the illumination "on" time are defined so

that the transmission factor at the individual frame may be identical with respect to the human brightness sensation characteristic;

wherein this embodiment has almost the same structure as the embodiment 2; and

wherein the illumination start time and the illumination "on" time are controlled by controlling with predefined constant values [*e.g., see fig. 9; and page 15, line 6 - page 16, line 24 of the specification*].

Species 4A, drawn to inventive embodiment 4, wherein the light control, such as the illumination start time and the illumination "on" time for the individual area, is controlled by the light shielding function of the shutter 304, it is possible for the number of the fluorescent tubes to be not necessarily equal to the number of areas, and wherein is not required for the fluorescent tube 303 to flash on and off alternately, the fluorescent tube can be continuously turned on, and therefore, the lifetime of the fluorescent tube 303 can be extended; and

wherein the illumination start time and the illumination "on" time are controlled dynamically [*e.g., see figs. 10 and 11; and page 17, line 1 - page 18, line 17 of the specification*].

Species 4B, drawn to inventive embodiment 4, wherein the light control, such as the illumination start time and the illumination "on" time for the individual area, is controlled by the light shielding function of the shutter 304, it is possible for the number of the fluorescent tubes to be not necessarily equal to the number of areas, and wherein is not required for the fluorescent tube 303 to flash on and off alternately, the fluorescent tube can be continuously turned on, and therefore, the lifetime of the fluorescent tube 303 can be extended; and

wherein the illumination start time and the illumination "on" time are controlled by controlling with predefined constant values [*e.g., see figs. 10 and 11; and page 17, line 1 - page 18, line 17 of the specification*].

Species 5A, drawn to inventive embodiment 5A, wherein a sheet-type light emitting element is used for the illumination unit 300; and wherein

wherein the illumination start time and the illumination "on" time are controlled dynamically [*e.g., see fig. 12; and page 18, line 18 - page 20, line 14 of the specification*].

Species 5B, drawn to inventive embodiment 5A, wherein a sheet-type light emitting element is used for the illumination unit 300; and wherein

wherein the illumination start time and the illumination "on" time are controlled by controlling with predefined constant values [*e.g., see fig. 12; and page 18, line 18 - page 20, line 14 of the specification*].

Species 6, drawn to inventive embodiment 6, wherein this embodiment has almost the same structure as the embodiment 2;

however, unlike the above-mentioned embodiments, the data emphasis circuit 110 emphasizes and converts the data for the overdrive drive operation, and the illumination lighting controller 122 controls the illumination start time and the illumination "on" time of the illumination unit so that the time integral value of the transmission factor for the frame in which the display characteristic (transmission factor) changes due to the overshoot drive may be almost

equal to the time integral value of the transmission factor for the frame in which the display characteristic (transmission factor) reaches a designated level and stays in a stable state [*e.g., see fig. 13; and page 20, line 15 - page 21, line 6 of the specification*].

The species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claims appear to be generic.

There is an examination and search burden for these patentably distinct species due to their mutually exclusive characteristics. The species require a different field of search (e.g., searching different classes/subclasses or electronic resources, or employing different search queries); and/or the prior art applicable to one species would not likely be applicable to another species; and/or the species are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species to be examined even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected species**, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

The election of the species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the election of species requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected species.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the species unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other species.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

2. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Piziali whose telephone number is (571) 272-7678. The examiner can normally be reached on Monday - Friday (6:30AM - 3PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeff Piziali/
Primary Examiner, Art Unit 2629
14 July 2008